

# Take 5 for Safety

Building 801 Release of 25-day Sr-82

Collider-Accelerator Department  
4-23-2013

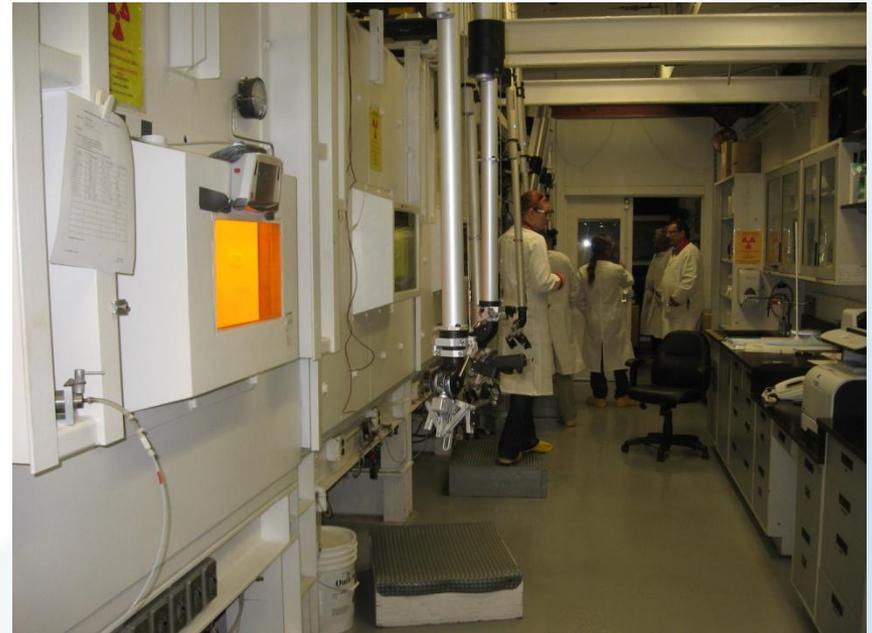


# Sr-82 Release Discovered on Filter

- April 18, 2013, 4:30 PM – surface of filter housing 1 R/h at 1 foot
- Filter at exhaust stack indicated no release to environment
- Lead blankets on the fence near the filter housing added to reduce the dose and allow shrinkage of the posted areas
- About 2 Ci of Sr-82, 100 mg, \$200,000 value on filter bank



**Outdoor Filter Bank**



**Target Processing Lab**

# Possible Direct Causes

## Hot Box 6



## Clam Shell



# Considerations to Date

- **Configuration Management of Process:**
- Consider adding radiation detection/alarms at filter bank and/or on ventilation piping
- Consider adding shielding to the outdoor filter bank
- Consider calibrating the hot plates or going back to digital and use procedure
- Consider making radiation measurements of the target material during each step of the processing
- Consider improving acid scrubber trunk hosing and enclosure over product
- Consider thoughtful review all changes to processing (e.g., Arronax product batching, hot plate changes)
- Consider controlled ventilation system drawings that indicate flow rate in each hot box including flow rate through scrubber
- Consider assigning QA level to Sr-82 process based on value of product
  
- **Configuration Management of Targets:**
- Consider heat transfer calculations for all targets
- Consider controlled drawings of all targets and any added BNL collars
- Consider estimating radioactivity yield using documented calculations
- Consider thoughtful review of all new or modified targets

**I know, I saw it right away too....  
No safety glasses or hearing protection!!!**

